IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): An intermittent drive control apparatus of a motor comprising:

motor drive means capable of driving a motor intermittently by selectively supplying current of a forward rotation direction and current of a reverse rotation direction to the motor;

rotation detection means which generate [[a]] rotation detection signals at a frequency proportionate to rotation of the motor; and

braking time calculation means which, when the motor drive means is controlled to supply the current of the forward rotation direction and the current of the reverse rotation direction to the motor, thereby braking and stopping the rotation of the motor, measures a period of the rotation detection signals to calculate a speed deceleration rate of the motor, and calculate a braking time between braking start and stop of the rotation of the motor based on a rotational speed of the motor at time of the braking start and the calculated speed deceleration rate, so that the motor drive means is controlled based on the calculated braking time.

Claim 2 (Original): An intermittent drive control apparatus of a motor according to claim 1, wherein

the braking time calculation means calculates the speed deceleration rate based on the period of the plurality of rotation detection signals, and

until the plurality of rotation detection signals are obtained, the motor drive means is controlled based on a braking time interval calculated last time.

Claim 3 (Original): An intermittent drive control apparatus of a motor according to claim 1, wherein

the braking time calculation means measures a first period based on a first rotation detection signal included in the rotation detection signals and a second rotation detection signal arriving subsequently to the first rotation detection signal, measures a second period based on the second rotation detection signal and a third rotation detection signal arriving subsequently to the second rotation detection signal, and calculates the speed deceleration rate based on the first period and the second period.

Claim 4 (Original): An intermittent drive control apparatus of a motor according to claim 1, wherein

the braking time calculation means obtains the speed deceleration rate by calculating an average speed of each pair among a plurality of pairs of the rotation detection signals.

Claim 5 (Original): An intermittent drive control apparatus of a motor according to claim 1, wherein

the braking time calculation means uses a rotational speed of the motor at time of braking start as one of average speeds used for calculation of the speed deceleration rate.

Claim 6 (Original): An intermittent drive control apparatus of a motor according to claim 4, wherein

the braking time calculation means calculates first and second average speeds based on first and second detection signal pairs which are not consecutive in a sequence of the rotation detection signals, calculates the speed deceleration rate based on the first and second

average speeds, and calculates a plurality of average speeds by using one rotation detection signal occurring between rotation detection signals forming the first detection signal pair as one of rotation detection signals of the second detection signal pair.

Claim 7 (Original): An intermittent drive control apparatus of a motor according to claim 4, wherein

the braking time calculation means uses a rotational speed of the motor at time of braking start as one of average speeds used for calculation of the speed deceleration rate.

Claim 8 (Currently Amended): An intermittent drive control apparatus of a motor according to claim 1, further comprising:

braking time correction means for setting the braking time interval equal to a value which is longer than the time calculated by the braking time calculation means by a predetermined time interval, when re-supplying a current of the same rotation direction as that before braking start, after stop of the motor.

Claim 9 (Currently Amended): An intermittent drive control apparatus of a motor, comprising:

a motor configured to drive the motor intermittently by selectively supplying a current into the motor in a forward rotation direction and a current in a reverse rotation direction;

a rotation detector which generates a rotation detection signal at a frequency proportionate to rotation of said motor;

a rotational speed detector to obtain a rotational speed of said motor based on said rotation detection signal; and

a driving controller configured to control the motor ~~driver~~ to supply current of a reverse rotation direction to the motor for a predetermined period of time, thereby braking and stopping the rotation of the motor.

wherein said driving controller includes a braking time interval calculator configured to calculate a time interval of said braking,

said braking time interval calculator measures a period of said rotation detection signal to calculate a speed deceleration rate of said motor, and calculates a braking time between start and stop of the rotation of the motor based on a rotational speed of the motor at the time of the braking start and the calculated speed deceleration rate, and

said driving controller controls the motor ~~driver~~ so that current of a reverse rotation direction may be supplied to the motor during the calculated time.

Claim 10 (Currently Amended): An intermittent drive control apparatus of a motor according to claim 9, wherein

the braking time interval calculator calculates the speed deceleration rate based on the period of the plurality of rotation detection signals, and

until the plurality of rotation detection signals are obtained, the motor ~~driver~~ is controlled based on a braking time interval calculated last time.

Claim 11 (Previously Presented): An intermittent drive control apparatus of a motor according to claim 9, wherein

the braking time interval calculator measures a first period based on a first rotation detection signal included in the rotation detection signals and a second rotation detection signal arriving subsequently to the first rotation detection signal, measures a second period

based on the second rotation detection signal and a third rotation detection signal arriving subsequently to the second rotation detection signal, and calculates the speed deceleration rate based on the first period and the second period.

Claim 12 (Previously Presented): An intermittent drive control apparatus of a motor according to claim 9, wherein

the braking time interval calculator obtains the speed deceleration rate by calculating an average speed of each pair among a plurality of pairs of the rotation detection signals.

Claim 13 (Previously Presented): An intermittent drive control apparatus of a motor according to claim 9, wherein

the braking time interval calculator uses a rotational speed of the motor at time of braking start as one of average speeds used for calculation of the speed deceleration rate.

Claim 14 (Currently Amended): An intermittent drive control apparatus of a motor according to claim 12 [[4]], wherein

the braking time interval calculator calculates first and second average speeds based on first and second detection signal pairs which are not consecutive in a sequence of the rotation detection signals, calculates the speed deceleration rate based on the first and second average speeds, and calculates a plurality of average speeds by using one rotation detection signal occurring between rotation detection signals forming the first detection signal pair as one of rotation detection signals of the second detection signal pair.

Claim 15 (Previously Presented): An intermittent drive control apparatus of a motor according to claim 12, wherein

the braking time interval calculator uses a rotational speed of the motor at time of braking start as one of average speeds used for calculation of the speed deceleration rate.

Claim 16 (Currently Amended): An intermittent drive control apparatus of a motor according to claim 9, further comprising:

a braking time interval corrector ~~calculator~~ for setting the braking time interval equal to a value which is longer than the time calculated by the braking time interval calculator ~~calculation means~~ by a predetermined time interval, when re-supplying a current of the same rotation direction as that before braking start, after stop of the motor.